**Cyber Security Center**

**Logic Development Program**

**C# Collections**

*[N: B: Must use Exception Handle in each program]*

| SL | Problems |
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| 1. | Write a program in C# Sharp to store elements in an array and print it. Go to the editor Test Data:  Input 10 elements in the array:  element - 0: 1  element - 1: 1  element - 2: 2  .......  Expected Output:  Elements in array are: 1 1 2 3 4 5 6 7 8 9 |
| 2. | Write a program in C# Sharp to read n number of values in an array and display it in reverse order.  Test Data:  Input the number of elements to store in the array :3  Input 3 number of elements in the array:  element - 0: 2  element - 1: 5  element - 2: 7  Expected Output:  The values store into the array are:  2 5 7  The values store into the array in reverse are:  7 5 2 |
| 3. | Write a program in C# Sharp to find the sum of all elements of the array. Test Data:  Input the number of elements to be stored in the array :3  Input 3 elements in the array:  element - 0: 2  element - 1: 5  element - 2: 8  Expected Output:  Sum of all elements stored in the array is: 15 |
| 4. | Write a program in C# Sharp to copy the elements one array into another array. Test Data:  Input the number of elements to be stored in the array :3  Input 3 elements in the array:  element - 0: 15  element - 1: 10  element - 2: 12 |

|  | Expected Output:  The elements stored in the first array are:  15 10 12  The elements copied into the second array are:  15 10 12 |
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| 5. | Write a program in C# Sharp to count a total number of duplicate elements in an array. Test Data:  Input the number of elements to be stored in the array :3  Input 3 elements in the array:  element - 0: 5  element - 1: 1  element - 2: 1  Expected Output:  Total number of duplicate elements found in the array is: 1 |
| 6. | Write a program in C# Sharp to print all unique elements in an array.  Test Data:  Input the number of elements to be stored in the array :3  Input 3 elements in the array:  element - 0: 1  element - 1: 5  element - 2: 1  Expected Output:  The unique elements found in the array are:  5 |
| 7. | Write a program in C# Sharp to count the frequency of each element of an array. Test Data:  Input the number of elements to be stored in the array :3  Input 3 elements in the array:  element - 0: 25  element - 1: 12  element - 2: 43  Expected Output:  Frequency of all elements of array:  25 occurs 1 time  12 occurs 1 time  43 occurs 1 time |
| 8. | Write a program in C# Sharp to find maximum and minimum element in an array. Test Data:  Input the number of elements to be stored in the array :3  Input 3 elements in the array:  element - 0: 45  element - 1: 25  element - 2: 21  Expected Output:  Maximum element is: 45  Minimum element is: 21 |

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| 9. | Write a program in C# Sharp to separate odd and even integers in separate arrays. Go to the editor  Test Data:  Input the number of elements to be stored in the array :5  Input 5 elements in the array:  element - 0: 25  element - 1: 47  element - 2: 42  element - 3: 56  element - 4: 32  Expected Output:  The Even elements are:  42 56 32  The Odd elements are:  25 47 |
|  | 10. Write a program in C# Sharp to delete an element at desired position from a **list**. Test Data:  Input the size of **list**: 5  Input 5 elements in the array in ascending order:  element - 0: 1  element - 1: 2  element - 2: 3  element - 3: 4  element - 4: 5  Input the position where to delete: 3  Expected Output:  The new list is: 1 2 4 5 |